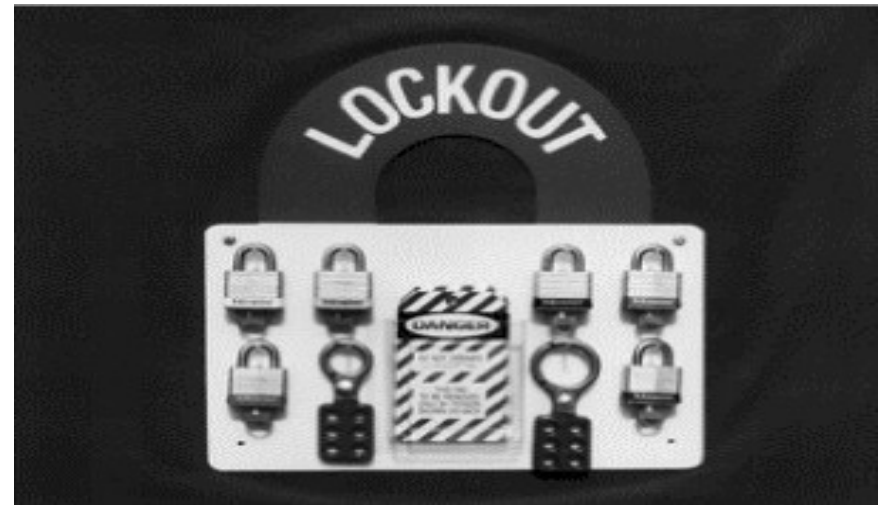


LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

LOCKOUT SAFETY KIT



References

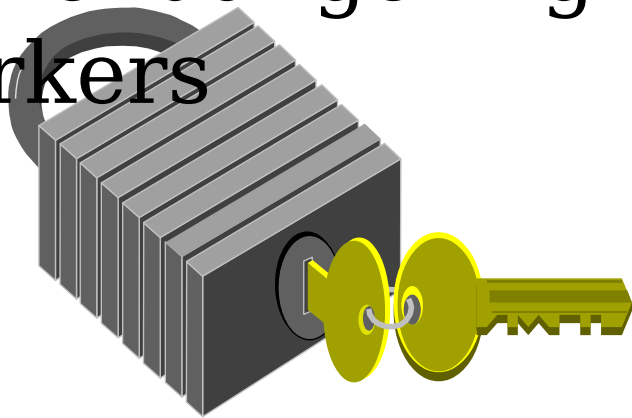
29 CFR 1910.147 and .333
NAVMC DIR 5100.8,
Chapter 12

Purpose

- Lockout/tagout procedures are designed to prevent needless deaths and serious injuries to service and maintenance personnel by controlling hazardous energy

What is Lockout?

- Lockout is a method of keeping equipment from being set into motion (energized), and endangering workers



CAUTION

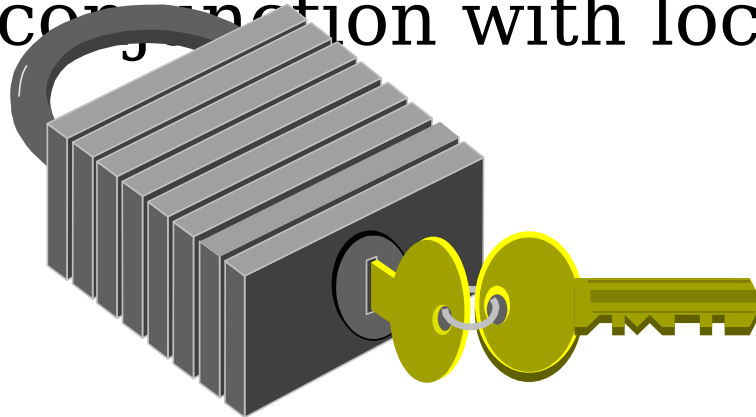
**THIS MACHINE
MUST BE
LOCKED OUT
PRIOR TO
SERVICING**

Capable of Being Locked

- An energy isolating device can be locked if
 - Designed with a hasp, other attachment, or integral part to which a lock can be attached
 - It has a locking mechanism built in to it
 - Lockout can be achieved without disassembling, rebuilding, or replacing energy isolating devices or permanently altering it's energy control capability

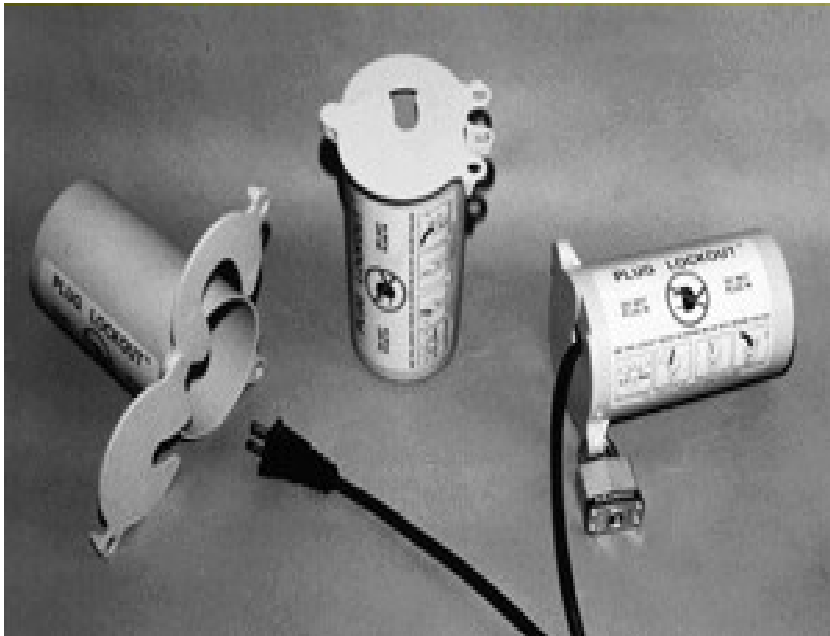
Lockout Devices

- PADLOCKS
 - not used for any other purpose
 - all locks must be the same color, shape, and size
- TAGS
 - used in conjunction with locking device



Electrical Lockout Devices

PLUG TM LOCKOUT

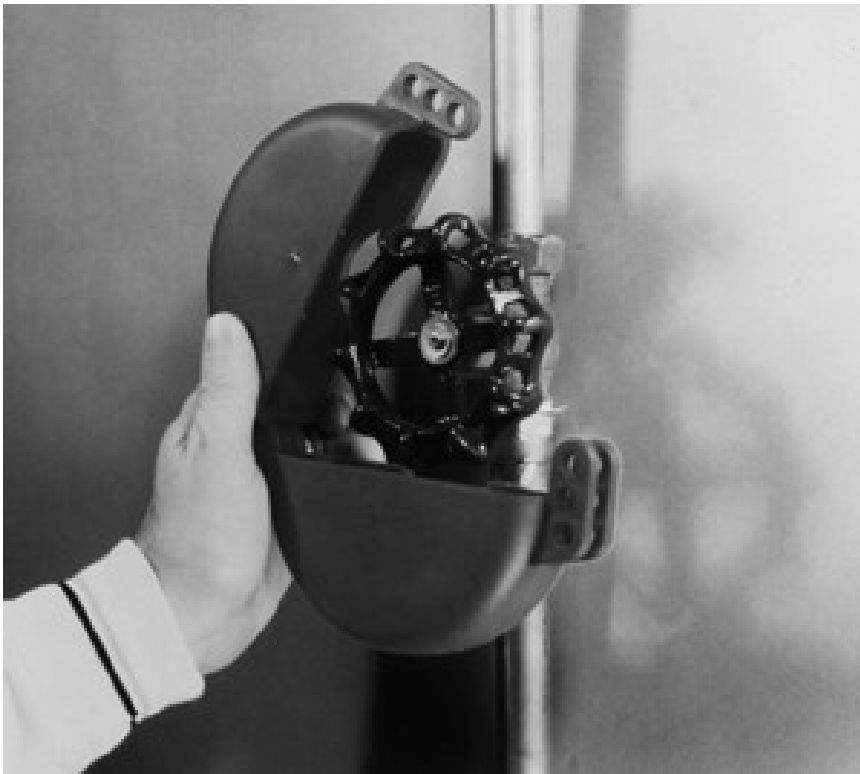


BREAKER LOCKOUTS



Valve Lockout Devices

SAFTEE DONUTS

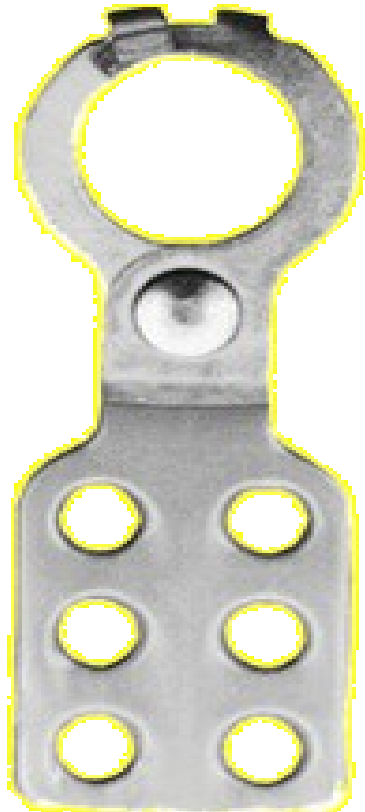


BALL VALVE LOCKOUTS



Multiple Lockout Device

SAFETY LOCKOUTS



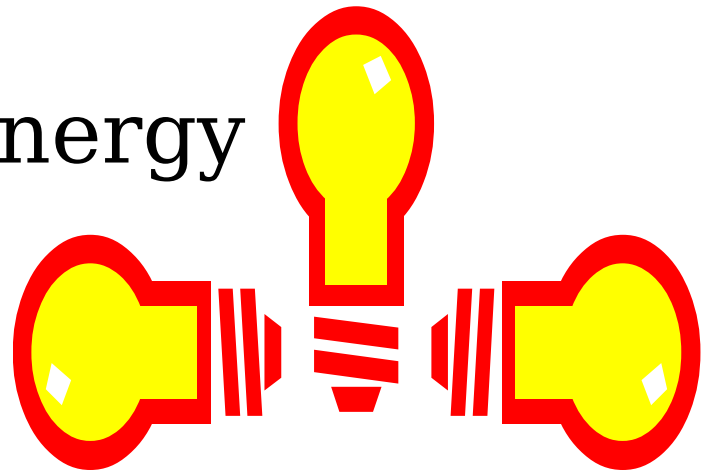
What is Tagout?

- The energy isolating device is placed in the safe/off position and a written warning or tag is attached to it



When Should You Lock or Tag Out?

- Whenever performing service or maintenance around any machine where injury could be sustained by
 - unexpected startup of the equipment
 - release of stored energy



Affected Worker

- Person who is working in an area in which service or maintenance is being performed or whose job requires operating a machine or equipment which service or maintenance is being performed under lockout/tagout shall comply with all



Authorized Worker

- Person who locks or tags out a system, machine, or equipment to perform service or maintenance must comply with the LOTO Program and must inform the LOTO Coordinator of any hazardous situations which may be harmful to personnel



Who is Subject to LOTO?

- Marine Corps military and civilian personnel who could be exposed to hazardous energy sources shall be trained in LOTO
- Personnel authorized to perform LOTO will be trained commensurate with their responsibilities

Commander's Responsibilities

- Ensure all personnel who could be exposed to hazardous energy sources receive formal training
- Ensure the LOTO Program is evaluated
- Ensure specific LOTO energy control procedures are developed and maintained for all systems and equipment
- Ensure the LOTO Program is implemented and followed, and supervisors and individuals are held accountable for failure to comply
- Designate a LOTO Coordinator in writing with a copy to the ISM or unit safety officer

ISM/Unit Safety Officer Responsibilities

- Coordinate initial and annual LOTO training
- Evaluate the LOTO program
- Provide technical assistance in drafting specific energy control procedures for each piece of affected equipment

LOTO Coordinator Responsibilities

- Administer the LOTO Program within their unit
- Enforce LOTO procedure compliance
- Maintain the LOTO Log
- Control the issue of LOTO devices

Responsibilities

- Affected Workers
 - Comply with all requirements of the LOTO Program
- Authorized Workers
 - Comply with the LOTO Program when doing maintenance, service, repair, or modifications to machinery and equipment
 - Inform the LOTO Coordinator of any hazardous situations

Written LOTO Procedures

- Develop shop level specific written procedures for each piece of equipment or machinery before service or maintenance is performed



Written Program

- Scope
- Purpose
- Authorization
- Rules
- Techniques to be utilized
- Means to enforce compliance

Written Procedure Exceptions

- Written procedures are not required if ALL the following exist
 - The machine or equipment has no potential for stored or residual energy after shut down
 - Machine has a single energy source that is readily identified and isolated
 - Isolation and LO will completely deenergize and deactivate the machine
 - Machine/equipment is isolated from the energy source and locked out during maintenance
 - A single device will achieve a lockout condition
 - The lockout device is under the exclusive control of the authorized worker doing the work
 - No accidents have happened on the machine or equipment as a result of LOTO

LOTO Device Application

- Authorized worker attaches locks or tags to each energy isolating device in a manner to hold the device in the safe or off position
- All potentially hazardous stored or residual energy gets rendered safe by the authorized worker
- Prior to starting work the authorized worker will verify that isolation and de-energization have been done
 - Activate controls to ensure it will not operate
 - Return controls to safe or off position
- Complete applicable portions of the LOTO Log

Temporary Removal of LOTO Device

- Clear all tools and materials
- Ensure affected workers have been safely removed from area
- Authorized worker removes devices
- Energize or proceed with testing etc.
- Deenergize all systems and reestablish LOTO

Restoring from LOTO

- Check the area to ensure personnel are safe
- Remove all tools and equipment, reinstall guards
- Ensure controls are in safe or off position
- Remove LOTO devices
- Notify all affected workers and supervisor
- Operate isolating devices and restore energy to the machine or equipment
- Complete applicable portions of the LOTO Log

More Than One Worker

- Each worker places their own devices on energy isolating devices
- As each worker finishes their work, they remove their devices
- Only the last worker to remove their devices can reenergize the machine or equipment
- Each worker makes an entry in the LOTO Log when applying, and clearing their devices

Removal of LOTO Devices by Other Than Authorized Worker

- LOTO Coordinator may remove devices if the authorized worker who applied them is not available and...
 - All reasonable efforts were made to contact the authorized worker
 - The authorized worker will be informed that the LOTO device(s) have been removed before they resume work
 - Indicate the name of the person who notifies the authorized worker and the date and time the device(s) were removed in the LOTO Log

Lock-out / Tag-out



Contractors and Other DoD Personnel

- Contractors working on Marine Corps equipment shall comply with 29 CFR 1910.147
- ROICC or contracting agent ensures contractors are informed of the elements of this program and get information about their program
- The contractor informs supervisory personnel in the affected work site of their program
- DoD personnel from other activities performing work on Marine Corps equipment must comply with the respective activity's LOTO program
- Commanders will ensure their personnel understand and comply with outside activity's LOTO program

Shift or Personnel Change

- The LOTO Coordinator will brief replacement personnel and ensure an orderly transfer of LOTO devices between on-coming and off-going authorized workers
- Change of LOTO devices must be done face-to-face with no gaps in protection

Program Evaluation

- The ISM or unit safety officer shall evaluate the effectiveness of the entire LOTO program at least annually
- All discrepancies will be documented and corrected
- Use NAVMC 11402 in Figure 12-1 for the evaluation

Training

- Provided to all authorized and affected workers and other personnel as required by 29 CFR 1910.147
- Only LOTO Coordinators and authorized workers may perform LOTO procedures
- Instructors deemed “qualified” by the ISM or unit safety officer will conduct training and prepare records certifying that employees have been trained
- Maintain training records IAW Ch 5 of NAVMC DIR 5100.8

Retraining

- Will be conducted when...
 - There is a change in job assignment, machine, equipment, or process that presents a new hazard
 - There is a change in the energy control procedures
 - The annual evaluation or other reasons indicate there is a problem with personnel knowledge or use of energy control procedures

Electrical LOTO

- Requires a lock and a tag to be used together
- A tag may be used by itself if the disconnecting source doesn't have lockout capability (29 CFR 1910.333)
- A qualified person must test all circuit elements and parts that personnel will be exposed to ensuring they are deenergized
- Test equipment will be checked for proper operation immediately before and after each test

Lock It and Tag It Before Servicing

• Lock Out Safety



• Lock Out and Tag



LOTO Mishaps

- Supervisor must fully investigate mishaps and report causal factors to the ISM or unit safety officer
- If a mishap involves the control of hazardous energy with a single lockout source a specific written procedure will be implemented before work continues
- If a mishap involves a specific procedure for a piece of equipment the LOTO written procedure will be reevaluated and modified as necessary before work continues

ELECTRICAL BURNS

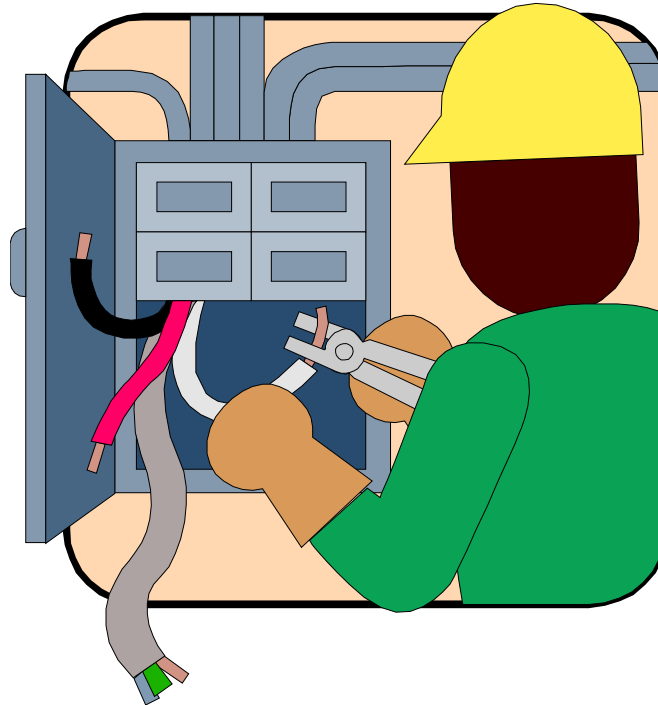
- Most common shock-related, nonfatal injury
- Occurs when you touch electrical wiring or equipment that is improperly used or maintained
- Typically occurs on the hands



Forms

- Turn to the back of NAVMC DIR 5100.8, Chapter 12 for samples
 - Figure 12-1, NAVMC 11402, LOTO Evaluation
 - Figure 12-2, NAVMC 11403, LOTO Checklist
 - Figure 12-3, NAVMC 11404, LOTO Log
 - Figure 12-4, Sample LOTO tag

Lock-out/Tag-out



Questions?